

Perceptions of Pack and Saddle Stock in Wilderness:
A Historical and Geographical Review of a Resource Conflict

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INTRODUCTION

I have hiked mile upon mile of trails pock marked with deep horse and cow prints, which when combined with their excrement, turn trails into bogs....I have to get my water from streams that have droppings in them at every crossing...Some people (who probably are not the backpackers who have to carry everything) leave behind teapots, pots and pans, glass jars, beer cans, campfire grills, and build permanent frames for tents, tarps, hitching posts etc....I can't help but feel that 1,000 hikers' loving care for the land is undone by one cow or one horse. Let's face it. Compared to horses and cows, hikers have almost no impact on the wilderness.

--Anonymous letter to Continental Trail Alliance 1997

For those who use pack and saddle stock, leading the pack train is a way of reliving the pioneer era. It provides a link with the past, and is something that cannot be done without a trail system, trailhead access, and undeveloped areas for camping.

-- Jennifer Roeser, pack station operator 2003

Wilderness managers are frequently confronted with these kinds of conflicting comments. It has long been acknowledged that recreation activities can cause conflict among stakeholders with different perspectives. In 1949, Aldo Leopold, one of the earliest proponents of wilderness preservation, noted "Public policies for outdoor recreation are controversial. Equally conscientious citizens hold opposite views on what is and what should be done to conserve its resource base." Over the last forty years, since the Wilderness Act was passed in 1964, the appropriateness of recreational stock use in wilderness has become the topic of exactly this kind of controversy.

When Leopold and other wilderness visionaries imagined a National Wilderness Preservation System, they did not predict that the inclusion of pack and saddle stock in their initiative would generate unrest. Pack stock figured prominently into the discussion of wilderness designation and it was suggested that wilderness areas should be at least large enough to allow for a two-week pack trip (Leopold 1921). Leopold (1949) explained that "wilderness areas are first of all a sanctuary for primitive arts of wilderness travel, especially canoeing and packing."

This research paper describes and elucidates the evolution of this conflict. It first follows the history of the recreational stock issue, paying particular attention to key events and changing strategies over time. Then it examines the various resource perceptions of groups with an interest in recreational pack and saddle stock by outlining their arguments. Finally, it looks at the issue from a geographic perspective to develop some spatial understanding of the issue on a national scale.

Literature Review

Concerns about resource impacts associated with recreational stock use have prompted many biological studies. Researchers have quantified the impact of pack stock on wilderness resources including: trampling vegetation (Weaver and Dale 1978 Cole and Spildie 1998) grazing (Moore et al. 2000, Olson-Rutz et. al. 1996), soil erosion (Deluca et al. 1998) and animal waste (Atwill et al. 2000, Johnson et al. 1997).

Other studies focus on social aspects of stock-hiker conflicts in several wilderness areas including the John Muir Wilderness (Watson et al. 1993 and Watson et al. 1994) and Sequoia Kings Canyon Wilderness in California (Watson et al. 1993), Charles C. Deam Wilderness in Indiana (Watson et al. 1993), and the Eagle Cap Wilderness in Oregon (Kajala 1994). While all of these social impact studies found the conflict to be asymmetric, with hikers disliking stock users more often than the reverse, the intensity of conflict varied across the wilderness areas. This suggests spatial variation in the issue, although no studies have documented variation on a national scale. Since these studies only provide a snapshot of the conflict at a particular moment in time, they do not address how the issue may have changed or evolved over time. There have been no longitudinal studies that have traced the changes in levels of conflict or perceptions about pack and saddle stock in wilderness.

Building on this social and biological research, a number of studies have identified alternative management strategies. Research has outlined alternatives and recommendations to manage the conflict between hikers and stock users (Watson and Kajala 1995, Watson et al. 1993), to address the resource impacts of recreational pack stock (McClaran 2000, Spildie et al. 2000, McClaran and Cole 1993) and to determine management actions most preferred by both hikers and stock users (Kajala 1994). Unfortunately, many of these techniques have never been put into practice or evaluated

because of the social and political discord surrounding recreational livestock in wilderness.

Objectives

The objectives of this study are to:

1. Document the history of the controversy surrounding pack and saddle stock in wilderness since the Wilderness Act was passed in 1964.
2. Identify the perceptions held by pack and saddle stock users and environmental and hiker groups as reflected in published literature.
3. Provide a starting point for understanding the geographic variation in the issue.

Methodology

Three techniques were used to gain insight into the emergence of the controversy, the changing philosophical arguments, the strategies employed to address the problem and the spatial distribution of the issue. First, information was gathered by reviewing interest groups' published literature and websites. Second, a search of newspaper articles dealing with recreational stock and wilderness was conducted. Finally, informal interviews were conducted with interest groups and wilderness managers to supplement this information.

A page-by-page review of the quarterly newspaper of the Back Country Horsemen of America (1995-present) was conducted to help understand the perspective of private individuals who account for about 60 percent of all pack and saddle stock use of wilderness (McClaran 2000). Newspapers were not available for review prior to 1995, therefore some interviews with stock users were conducted to help improve understanding of earlier issues. The Back Country Horsemen of America (BCHA) is a national organization that was founded in 1979 as a service and education organization with a mission to protect backcountry stock access to federal lands. It has been suggested that "the BCH organization is the most credible non-commercial representative of the wilderness livestock users" (Filkins 1997).

Commercial outfitters and guides represent a much smaller percentage of wilderness pack and saddle stock users — approximately 30 percent (McClaran 2000). Much of the controversy surrounding commercial stock outfitters has occurred in the Sierra Nevada. As a result, newspaper articles addressing pack stock in wilderness were

reviewed in area newspapers that report on the Sierra Nevada region such as the *Fresno Bee*, *Modesto Bee* and *Sacramento Bee*. Informal interviews were also conducted with outfitters to try to capture their perspectives.

In order to understand the perspective of other recreational wilderness users and environmentalists, a page-by-page review of Sierra Club publications -- The Sierra Club Bulletin (1964-1977) and Sierra (1978-2004) -- was conducted. The Sierra Club was founded in 1892 as a recreational and environmental organization. Sierra Club publications were selected for this study, in part, because of the availability of publications dating back to 1964 but also because the Club, once known for hosting large stock-assisted wilderness "high trips" for its members, phased these trips out in the years following the Wilderness Act.

In addition to reviewing the issue from a regional perspective, informal interviews with wilderness managers nation-wide helped to examine the controversy in different geographic areas. A review of horse-use related articles in periodicals nation-wide, using electronic newspaper indexes, also helped to get a broader understanding of the issue and to provide insight into geographic variation. Although this study seeks to understand the issue of conflict over stock and pack animal impact on the wilderness on a national scale, specific attention is paid to California, where social and political discord has often brought the issue national attention. Because this issue has received the greatest political attention in California, a review of stock-related wilderness articles published in the *Los Angeles Times* (1964-present) was conducted.

It is hoped that this research paper's findings will inform wilderness policy-making and management in the Sierra Nevada and elsewhere, through improved understanding of the evolution of conflict and changing values and attitudes.

HISTORY OF THE ISSUE

Drafting a Wilderness Act that would be approved by Congress was not an easy task. Sixty-five different wilderness bills were introduced before the current Wilderness Act was accepted (Hendee, et al. 1990). However, the legislative record of the Wilderness Act suggests that limits to saddle and pack stock in wilderness were not among the many issues debated during the eight years of negotiation and compromise that preceded the Wilderness Act of 1964. Pack stock was viewed as a central component of wilderness recreation:

The man who wants a wilderness trip wants not only scenery, hunting, fishing, isolation, etc.— all of which can be found within a mile of a paved road — but also the horses, packing, riding, daily movement and variety found in a trip through a big stretch of wild country (Leopold 1921).

This perspective has not endured over time.

In studying the history of the controversy surrounding pack and saddle stock in wilderness, it became apparent that activities varied over four relatively distinct periods. In the first era (1900-1964) a wilderness recreation industry emerged that centered on travel with pack and saddle stock. This period will be referred to as the Equestrian Tradition Era. The second period began after the Wilderness Act was passed (1964-1979). This era witnessed a recreational boom and the emergence of conflict between hikers and recreational stock users. The third period, which began in the 1980s, saw an increase in management efforts to address impacts associated with recreational stock use. This period will be called the Institutional Phase. Finally, during the fourth and current phase, which began in the mid 1990s, the conflict has escalated and has entered into the political and judicial realm. Both supporters and critics of pack and saddle stock have become more sophisticated in presenting their positions as their abilities to access new sources of information and organize their constituents increased. This phase will be referred to as the Interest Group Phase.

An examination of the content of newspaper articles dealing with pack and saddle stock in wilderness published in the *Los Angeles Times* between 1964 and 2003 highlights these patterns. Table 1 summarizes the results:

Table 1: Changing interest in recreational stock in wilderness as reflected in articles published in the *Los Angeles Times* 1964-2003.

Years	Number of Articles	Article Emphasis		
		History & romance of stock use	Management actions	Conflict
1964-1979	6	66%		33%**
1980-1994	3	33%	33%	33%
1995-2003	4		25%	75%

**Unable to locate an archived copy of article: "Backpacking takes toll on High Sierra packing parties," 7 May 1972: III001. .
Classification of content is based on the title identified in Newspaper Index.

Equestrian Tradition Era: Recreational Pack Stock Heyday

Until the turn of the century, most recreational wilderness travel reflected the predominately rural and agricultural environment of the times. It involved horses – and it often included utilitarian activities such as fishing, hunting or trapping. Stewart Edward White, a prolific writer on wilderness travel at the time advised:

One truth you must learn to accept, believe as a tenet of your faith and act upon always. It is that your entire welfare depends on the condition of your horses. So absolute is this truth that it has passed into an idiom. When a westerner wants to tell you that he lacks a thing, he informs you that he is "afoot" for it (White 1904).

Not only were horses the primary means of transportation in this era, they were also the only practical way to travel into the wilderness when heavy wool blankets, cast-iron pots and implements and substantial canvas tents made travel without stock particularly impractical.

In 1901, the Sierra Club, which drew its membership from a primarily urban base, began leading "high trips" with a goal of exposing members to the natural values of wilderness areas. These pack stock-assisted trips lasted two weeks and included as many as 275 people, including packers (Colby 1964). Sierra Club outings appealed to a new kind of recreationist who came primarily from the San Francisco Bay Area and was eager to explore the high country, but not necessarily interested in traditional frontier modes of recreation. Until World War I this new "urban tradition found its principal expression in the activities of the Sierra Club" (Loughman 1967). It was not long before others were also leading large pack trips. Following World War I, a recreational packing industry

emerged to serve recreationists coming from the cities by car. By 1937, there were 71 outfits operating 2764 head of pack animals in the Sierras (Farris 2000).

Impacts of the increasing use of stock animals on the resource did not go unnoticed. The Sierra Club commissioned biologist Lowell Sumner to evaluate and make recommendations about the impacts of stock-assisted trips (McClaran 1989), resulting in a reduction to 125 people for high trips in 1947. The issue of pack stock impacts was also raised in 1949 at the first biennial Wilderness Conference, which was hosted jointly by Norman Livermore, a pack station operator and the Sierra Club. The conference kicked off with a discussion about how to address the impact of large numbers of pack animals on wilderness meadows. However, subsequent conferences tended to focus on broader philosophical questions about establishing a National Wilderness Preservation System. Until an enduring wilderness resource was secured legislatively, wilderness management problems and recreational resource impacts would not get much attention.

When recreational resource impacts were considered, wilderness preservation began to figure into the discussion. In a 1948 article in the *Sierra Club Bulletin (SCB)*, David Brower pondered whether mules were necessary in wilderness—his answer was “yes.” He argued that impact of wilderness on people was profound and these trips helped create advocates. Brower noted:

The argument that John Muir presented remains essentially valid. If we want wilderness—the spacious scenic wilderness that means something—we must make it known to the men who, knowing it will protect it. Those who like best the most Spartan of wilderness trips—cross-country backpacking—must make haste slowly in any attempts to impose such trips upon others, or there may be too few men in the wilderness to protect it.

Similarly, Will Colby, a high trip leader for nearly 30 years (1901-1929), explained:

The Sierra Club is looked upon as a band of locusts that would go through the country and get rid of the feed and make it difficult for others to come in. I always tried to offset this by arguing that the number of people that enjoyed the mountains through the Sierra Club was so large that it more than made up for the fact that the Sierra Club pack trains did eat up a great deal of grass and other materials the stock lived on (Colby 1964).

This belief that the wilderness could sustain high use and recover from impacts persisted into the 1960s, “high trips are among the largest of the clubs outings (about 100 people)...This number seems alarming to those that have never been on a high trip, but the mountains are big” (SCB 1967).

Post Wilderness Act Boom: Recreational Diversification

At the time the Wilderness Act passed there was a sense of camaraderie among groups of wilderness advocates representing many different recreational uses:

...certainly, there were many horse users involved in environmental groups such as the Wilderness Society and Sierra Club, and, of course, the various sport hunting and fishing organizations, but we didn't think of us as different from wilderness users that backpacked. The proposed wilderness regulation was not perceived as a threat to those of us who used stock. Even among the hardcore backpackers, it wasn't conceivable that stock would, in the future, be regarded by some as inappropriate in wilderness. We were all wilderness advocates, users and partners in a common crusade to secure and preserve for all of the American people an enduring resource of wilderness (Dailey 2001).

By the late 1960s, however, attitudes toward recreational stock began to change. The days had passed when “to speak of wilderness problems and management in the Forest Service was to often raise a smile and the rejoinder, ‘hunt, fish and trap’” (Snyder 1966). Increasingly pack and saddle stock was included on the list of wilderness problems.

This can be attributed to several factors. First, public attitudes about the environment began to change. A 1970 editorial in the *SCB* explained:

...1969 goes down in history...as the year of ecological awakening. In a matter of a few brief months, an explosive recognition of man's environmental problems burst upon us. Pollution, pesticides, population, environment, ecology, survival—all became routine subjects of headlines in the media and newly familiar words in everybody's vocabulary...It promises to be the issue of the early 70s (Wayburn 1970).

National Opinion Research Center (NORC) polls during this period also reflected this raised public awareness and concern for environmental issues.

This growing environmental concern was compounded by increasing numbers of recreational wilderness users. In the years following the passage of the Wilderness Act the number of recreational wilderness users increased significantly, nearly 300% between 1965 and 1979, and use intensity increased from approximately 0.25 recreation visitor

days per acre to 0.4 (Cole 1996). The impacts and challenges caused by this growing number of visitors were hard to ignore:

I suppose that ideally, every wilderness visitor would exist like frontiersman Jim Bridger probably did. But multiply Jim Bridger by many thousands and then you have sanitation, stream pollution, fireplace construction, bed-bough cutting, firewood scarcity, campsite soil compaction, and other factors to contend with in a magnitude that can be detrimental to the health and safety of people, soil vegetation and water. These things can not be ignored unless we are to reduce visitation to the scarcity of Jim Bridger (Snyder 1966).

Finally, the kinds of recreational users had changed. The growing popularity of backpacking meant that recreational use no longer centered on groups supported by pack stock; lightweight equipment had become readily available which made backpacking practical for almost anyone. This shift in recreational use was not easy for stock users: "For decades, horsemen had used the backcountry as if it were their own. And for the most part it was until backpacking came along.... Well, the horsemen were already there and they intended to hold their territory" (Reese 2002).

Other recreational users began to recognize the increased potential for resource damage and tension emerged between the growing number of backpackers and stock users. The Sierra Club questioned whether "we have not already reached the point at which popular mountain campsites, particularly meadows, can not survive the trampling of all the two-footed creatures (and the four-footed ones they bring with them) who want to visit" (Schmacher 1967). In 1970, in response to these concerns, they commissioned a series of wilderness impact studies, which were among the first to examine the social and environmental impacts of recreational stock use in wilderness.

This research revealed that stock can cause significant damage to wet meadows and increase soil erosion (Stanley et al. 1979). It was also the first study to document the conflict between hikers and stock users, noting that backpackers generally responded negatively to encountering stock (Absher and Absher 1979). The final report to the Sierra Club suggested strong regulatory measures for stock users: "The use of pack stock should be restricted to portions of the mountains specifically set aside for stock use" and "regulations to prevent and/or minimize physical damage to meadows by pack stock need to be established for all areas in the Sierra in which stock use is permitted." Other

research efforts to document the effects of stock use were not far behind. Several studies examined stock impact to trails (Dale and Weaver 1974, Weaver and Dale 1978, Whittaker 1978, Weaver et al. 1979) and noted greater impact by horses than hikers.

The scientific research helped to legitimize hiker's concerns. It was not long before things began to change. The Sierra Club altered the structure of their stock-supported trips. Efforts were made to reduce the number of animals on trips by decreasing the allowable dunnage weight. Stock group sizes were markedly reduced; in 1957, only 50% of trips had fewer than 50 members but in 1967, 80% had under 50. In 1972, the now famous "high trips" were abandoned all together. Other stock supported trips such as "burro trips," "base camps" and "saddle light" trips persisted after 1973 but they were limited to 25 participants.

Not surprisingly, as stock users were increasingly outnumbered they began to feel threatened. Not only did stock users face hostility from hikers and backpackers, but they began to feel that federal agencies' practices, particularly the Forest Service's were undermining their access to wilderness. In the years following the Wilderness Act, each agency worked to interpret the Act and formulate policy. The Forest Service adopted a very pristine definition of wilderness, which became known as the "purity argument" (Allin 1982). Human impacts were considered unacceptable and the agency worked to remove evidence of humans, including structures that helped to facilitate stock use, such as hitching racks, bridges, corrals and trail signs.

Eventually some stock users organized in response. In 1973, the Flathead Back Country Horsemen, one of the first horse users groups formed to protect wilderness access, was established in Montana. Their mission, in part, was to ensure that their local wilderness, the Bob Marshall, remained open to recreational stock use. They launched a campaign to improve the practices and image of stock users. Founding member Ken Ausk explained, "the handwriting was on the wall -- either clean up your act and make it compatible with the resource, or lose your right to horse use" (2000). They published a guidebook for low impact stock use and started a work project program to remedy some of the past abuses of stock users in hopes of changing public perceptions of horse users. By 1977 several other horsemen's clubs with similar missions had formed in Idaho and Montana (BCHA 2004).

Stock users everywhere found some relief in 1978 with the passage of the Endangered American Wilderness Act, which helped to put an end to the "purity argument." It acknowledged that some structures might be necessary in wilderness to protect the wilderness resource. Senator Frank Church explained, "it is not the intent of Congress that wilderness be administered in such a pure fashion as to needlessly restrict its customary public use and enjoyment. Quite the contrary, Congress fully intended that wilderness should be managed to allow its use by a wide spectrum of Americans" (1972).

With or without the purity doctrine it was becoming clear that the growing recreational impacts would need to be managed and researchers began to explore methods. Although the idea of recreation management and recreational carrying capacity was not new (Sumner 1942), it began to receive considerable academic attention in the mid to late 1970s. In a 1986 study, Drogin and others found that 40 percent of published papers dealing with carrying capacity had been published between 1975 and 1979. Despite the attention, 86% of wilderness areas had not established formal capacity limits in 1980 (Washburne and Cole 1983).

In the areas where "capacity limits" were applied, they were often unpopular, as they were generally created without public involvement. This was particularly true when questions of equity arose. Capacity limits established in the 1970s in the Sierra Nevada are still a source of controversy today:

In the very early 1970s, when the Forest Service was beginning to become concerned about over-use and over-crowding in the Sierra Nevada, the agency imposed trailhead "quotas" (limits) on hikers, but the commercial stock outfits were not affected, and were told (in writing) that they would be exempted from the trailhead quotas. The outfits then continued to expand over the years while the agency repeatedly reduced the quotas (i.e., access) for hikers. It just wasn't fair (Suk 2004).

Institutional Era: Wilderness Management and Planning

By the late seventies most managing agencies realized that recreational use would need to be managed more actively. In 1983 Washburne and Cole surveyed managers of all wilderness areas across the country and found that over 30% of managers were concerned about localized pack stock impacts on vegetation within their wilderness areas. Given that 25% of areas reported no stock use, this was a fairly significant result.

Managers were also asked generally about the prevalence of conflict between recreational users (not just between hikers and stock users)—29% of managers reported a problem.

This era marked the emergence of systematic planning frameworks and guidelines. By 1980 the National Forest Management Act required all Forest Service wilderness areas to include wilderness plans as part of National Forest Plans which would, "Provide for limiting and distributing visitor use of specific areas in accord with periodic estimates of the maximum levels of use that allow natural processes to operate freely and that do not impair the values for which wilderness areas were created." Similarly, the National Parks and Recreation Act of 1978 required, "identification of and implementation commitments for visitor carrying capacities." However, the carrying capacity concept was difficult for managers to apply (Stankey and McCool 1990) and as a result was not widely used. The model assumed that each area had an inherent capacity that could easily be observed through scientific study. In reality, the "capacities" were not always easy to discern and often required managers to make value judgments. Washburne and Cole (1983) found that by 1980 less than 15 percent of areas had applied capacity limits.

In the mid-1980s some alternative wilderness planning models began to emerge that addressed some of the challenges of "carrying capacity." New planning processes recognized that decisions should include not only resource conditions but also managerial and sociopolitical considerations. Models like Limits of Acceptable Change (LAC) (Stankey et al. 1985), Visitor Impact Management (VIM) (Graefe et al 1990) and Carrying Capacity in Recreation Settings (Shelby and Heberlein 1986) recognized that wilderness decisions could not be based on science alone.

The application of these models had several important consequences. First, because they recommended public participation in the wilderness planning process, both stock supporters and critics were drawn into the planning process. Recreational stock users became more active, organized and involved. In 1986 stock user groups in several states (MT, WA, ID, CA) united to form the first national recreational stock association, the Back Country Horsemen of America. By 1990, 35% of wilderness areas used public participation to develop standards for recreational livestock use (McClaran and Cole 1993). Recreational users began to expect that they would be involved in planning.

However, many wilderness areas (61%) still relied primarily on the professional judgment of wilderness managers rather public participation to form policy about recreational stock use (McClaran and Cole 1993). This approach had the consequence of leaving both sides feeling that their views were not sufficiently weighed and helped to fuel concerns about agency bias.

Second, the number of studies focusing on stock impacts increased. Scientific data were required by the new planning models to help inform decisions. A small body of research emerged to try to quantify stock impacts. These studies were often used to justify restrictions.

Third, these new planning models allowed for a variety of management alternatives other than simply limiting use, such as zoning and visitor education programs. Stock users generally advocate for the least restrictive action and therefore they developed strong “leave no trace” and low impact education programs for stock users. Octogenarian Toby Horst (2004), director of California Equestrian Trails and Lands Association, explained the threat of restricting use “forced the equestrian community to look at our animals and what they do. We have now come up with a raft of mediating actions to minimize impact....I’m not sure if left to our own devices we would have done this.” Restrictive management techniques also became more common during this period. In 1983 Washbourne and Cole found that stock use was prohibited in only 2 percent of wilderness areas—in 1990 McClaran and Cole found stock use was prohibited in 14 percent of areas.

Interest Group Era: Politics and Litigation

In the three decades that followed the passage of the Wilderness Act, the controversy surrounding recreational stock was slowly gaining momentum, but it was not until the late 1990s that the issue began to generate national attention. Years of experience and knowledge allowed interest groups to become more organized and more sophisticated in their approaches. Frustrations about federal agency policies and many of the other trends that emerged in the years after the Wilderness Act contributed to this progression. As H. Ken Cordell, Outdoor Recreation and Wilderness Research Leader with the Forest Service’s Southern Research Station, explained, “Usually, movement toward unity and then, organization by any group is created by the perception of a

common threat. The threat is here and it is real. It isn't just trails...its land access..." (2000).

Recreational stock users continue to be outnumbered by other users. In fact, they now represent a smaller proportion of total wilderness visitors than ever before. Today, recreational livestock use accounts for about 11% of all wilderness area visitation (McClaran 2000). Cordell (2004) found that participation in day hiking and backpacking has grown significantly in the last twenty years with an over 180 percent increase in both activities. Horseback riding participation has also grown in popularity, increasing 37 percent since 1983, but it has not kept pace with hikers. The shift in balance of recreational users presents a challenge for pack and saddle stock users—"not only do very few people in modern America know anything about recreational trail horse use, decision makers and implementers are a reflection of the experiences and knowledge of our society" (Wood 2002a).

Public concern for the environment has also continued to evolve. In 2000 a national survey on recreation and the environment showed that the public views protecting ecosystems and wildlife habitat as very important (Shields et al. 2002). Public perceptions of the value of wilderness in the U.S. have evolved to reflect this — Americans now rate environmental concerns (such as water quality, wildlife habitat, and endangered species) more highly than recreation or spiritual values (Cordell and Stokes 2001). Wilderness advocates have also grown less sympathetic to recreational values—a recent article in *Sierra* explains: "A new generation of wildlands advocates, as passionate as the old-timers but much more scientifically savvy...tend to view wilderness not only as a cultural amenity, but as an essential tool for saving ecosystems" (Hamilton 1994).

National policy has also begun to reflect these values. The idea of ecosystem management received support during the Clinton administration in ecosystem-based forest planning models exemplified in the Northwest Forest Plan (1994). Some stock users see this shift as the "purity doctrine" revisited. In a recent letter to President George W. Bush, the Back Country Horsemen of America expressed concern:

During the previous administration...we have observed a shift of emphasis in the federal agencies from one of managing our National Wilderness

Preservation System for the multiple purposes intended by congress (recreational, scenic, scientific, educational, conservation and historical use) to the singular objective of restoring and sustaining pristine ecological conditions. In many cases the restrictions appear to be unrelated to impact levels (Hill 2001b).

Ecosystems management has raised concerns that “inappropriate use of horses on wild landscapes can degrade wild ecosystems—the nation’s crown jewels” (Wood 2002c). Recognition that recreation can impact the environment is no longer limited to hiker groups—there is now widespread public awareness. Mike Dombeck, Forest Service Chief under the Clinton administration, cautioned, “The sideboards for recreation are no different from those for timber or grazing, or any other of the national forests. They must work within the limits of the land” (1999). Similarly, the Forest Service’s National Leadership Team, which identifies agency priorities, has identified unmanaged recreation as one of the four major threats to National Forest Lands today (Bosworth 2003).

As both supporters and critics of recreational stock use continued to work to ensure that their perspectives were reflected in wilderness policies they became more organized. New groups emerged such as the High Sierra Hiker’s Association in 1991 and the Hoosier Hiker’s Council in Indiana in 1995 with missions, in part, to address concerns about recreational stock impacts. Established groups such as the BCHA have continued to grow—membership has reached 16,000 members with chapters in 19 states. In a 1980 study of recreational conflict Jacob and Schreyer warned, “Once recreationists have allied themselves with interest groups and causes, conflict resolution becomes a costly political and legal process over which the resource managers have little control.”

In the face of an increasingly unsympathetic social and political climate, stock users realized they would have to be more proactive. At a recent Southern Equestrian Trails Conference Lynda Hill (2002) explained,

Historically, equestrians have failed to become involved until they perceive a threat to their access and use of the wilderness areas. As a result equestrians are constantly taking a defensive position. This attitude must change and equestrians must take a proactive role to ensure that equestrian use is preserved in wilderness areas....

One way stock users have become more proactive is by becoming more scientifically savvy. Scientific studies have long been used to support restrictions to recreational stock use but as the trend has shifted toward ecosystem-based management there has been an even greater emphasis on science and science-based decision making (Ostergren and Hollenhorst 2000). Stock users realized the power of scientific data and began to compile research that discredits assumptions about the impacts of stock use. A small group, Enviro Horse, hosts a web site that posts scientific studies related to stock impacts and provides analysis and commentary on studies that could be interpreted to oppose stock use. Professor Gene Wood of Clemson University explained that equestrians need to become “more proficient in challenging the presumptions of adverse effects of their activities” (2002b).

Another new tactic is to engage in politics at the national level. An article in the newspaper of the BCHA explained:

In the past, I never thought much of the politics of keeping trails open to the stock users. Presently, I do not consider myself a politician but do realize the importance of our existence through the political process. ...we need those that are letter writers or stump preachers that can talk the political lingo (Darling 1995).

In 2003, horse user groups began working with California State Representatives to draft H.R. 2966, the “Right to Ride Livestock on Federal Land Act,” which requires federal land management agencies to “facilitate the continued use and access of pack and saddle stock animals on such lands, including wilderness where there is a historical tradition of such use.” The bill tries to address stock users’ concerns that decisions might be made based on the claims of environmental interests such as conflicting social values rather than documented resource impacts. It requires that a comprehensive environmental analysis (EIS) be completed before any limitations can be imposed on equestrian users. This would effectively shift the burden of proof onto the federal agencies—stock users would no longer be on the defensive. The bill passed the House of Representatives on Sept 21 2004, and has moved to the U.S. Senate.

Similarly, pack and saddle stock users worked to make sure that recent Wilderness Bills in California, Idaho and Washington included wording to guarantee that

stock use is recognized as a legitimate use. For example, a recent bill proposing the addition of three wilderness areas in Idaho (The Central Idaho Economic Development and Recreation Act of 2004) notes "nothing in this title shall preclude horseback riding or the entry of recreational saddle or pack stock into wilderness areas designated by section 301, including when such entry is made by commercial outfitters."

Stock use proponents have also recognized the need to have national representation to ensure that equestrian views are represented during policy formulation. At the Southeast Equestrian Trails Conference in 2000, attendees unanimously decided that a national advocacy group was needed to represent recreational stock interests in Washington. In 2001 the American Horse Council, a national advocacy group representing equine interests, responded by creating a committee on recreation.

Concurrently, environmental groups have successfully used the courts to address some of their concerns. In 2000 Forest Service Employees for Environmental Ethics, Wilderness Watch and High Sierra Hikers Association filed suit in a US District Court arguing that the Forest Service violated federal law by issuing permits to outfitters for pack trips in the Ansel Adams and John Muir Wilderness Areas in California without studying the environmental impact of horses. Bob Dale of FSEEE noted, ".....the Forest Service... has for years been remiss in its public duty to consider and disclose the significant impacts associated with these uses of the wilderness. We hope that the agency will now come clean with a full disclosure of the environmental problems" (FSEEE). In November 2001, the court ruled in favor of the environmental groups.

There were also earlier victories. In 1993 the court ruled in favor of Wilderness Watch when they sued the Forest Service for policies relating to commercial outfitters in the Frank Church Wilderness in Idaho. They objected to commercial outfitters keeping permanent structures, installations, piped water systems, and caches of goods in Wilderness. The Court found that this practice "directly violates the express provisions of the Wilderness Act and its implementing regulations."

However, not all lawsuits have been successful. For example in 2001 when the Hoosier Hiker's Council, a group that strongly advocates hiker-only trails, sued the Forest Service for plans to reroute wilderness trails in the 13,000-acre Charles C. Deam

Wilderness to make them more accessible to stock, the court ruled in favor of the defendant (AP 2001).

Discussion

In spite of some victories for both sides, the conflict is not going away. In fact, these judicial and political tactics may make resolving the problem less likely. This issue has many elements of a “wicked problem”—both sides define the problem differently and these “imprecise goals, [and] fuzzy equity questions” make resolution difficult (Allen & Gould 1983). Salwasser (2004) notes that decision making through political or judicial power plays “is actually the single largest barrier to an essential coping strategy for wicked problems in democracies, namely collaboration.”

Collaboration also presents a challenge since each group increasingly views the other as radical and unyielding. As Tom Suk (2004) of the High Sierra Hikers Association explained,

...many stock users are like many gun owners: They think if one trail is closed to stock, that their ability to ride on public lands is threatened. I've had dinner and beers and long talks with both stock outfitters and reps of advocacy groups for private stock users (i.e., Backcountry Horsemen). We get along just fine over steaks and beer, but at the end of the night, they have no interest/intention of changing their ways to follow new restrictions necessary to protect natural resources. It's an extreme position, and they are sticking to it.

Similarly, stock users often suggest that environmental groups are “radical preservationists.” Recreational stock users and commercial outfitters have repeatedly been quoted as saying that environmental groups such as HSHA advocate for total removal of all pack and saddle stock from wilderness when, in fact, the HSHA maintains that they “simply want to see stock use regulated and managed in a way that protects the High Sierra wilderness” (Suk 1998).

Ironically, although both groups identify the other as having very different objectives from their own, both define themselves similarly as environmentalists and conservationists. A recent article in the BCHA newspaper explained, "BCH members should not be afraid of being linked to environmental causes.....Our concepts and practices are sound. We don't need to apologize to anybody for being environmentally conscious" (Sammons 2001). Drawing out these similarities will play an important role in resolving the conflict.

THE SUBSTANCE OF ARGUMENTS

Resource conflicts often emerge when the activities of one set of resource users antagonize another. This is particularly true when public resources are involved. In the case of recreational stock use, stock users are impacting a public resource in a way that some hikers, watchdog groups and other environmentalists consider unacceptable. As is the case with most resource conflicts, arguments offered by both sides are complex, sometimes contradictory and tend to change over time.

Generally, proponents include individual recreational stock users, commercial outfitters and guides, and interest groups who may or may not use stock but for philosophical or economic reasons believe its use should not be limited. The proponents' arguments often reflect the perspectives of the group or organization they belong to. For example, some recreational stock users might support pack stock use because it is a form of outdoor recreation. Other recreationists support pack animals because they want to have a "traditional" experience – to explore the wilderness as their ancestors might have, packing in the supplies they needed on horseback. Commercial outfitters might offer a primarily economic argument, since their livelihood is dependent on stock use. There is another less vocal segment, which includes some holders of federal grazing permits or mechanized recreational users, who support recreational pack-stock use because they believe that any restrictions might indirectly threaten their own activities.

As with the proponents, groups opposing stock use are diverse and include individual hikers, hiker groups and watch-dog environmental groups such as Wilderness Watch and Forest Service Employees for Environmental Ethics (FSEEE). Traditionally, conservation-oriented wilderness advocacy groups such as the Sierra Club or the Wilderness Society have not taken formal positions opposing recreational stock use. This seems to reflect a tacit acknowledgement that recreational stock users are important advocates for wilderness and valuable constituents.

The arguments from opponents of pack animal access to the wilderness range from banning all use to advocating some use with limitations. Generally, the opponents' arguments include concerns about resource or social impacts of pack stock on wilderness users' experiences. Some individuals believe all stock use in wilderness is inappropriate and call for an outright ban. A more common approach, however, is to propose more

selective limits such as creating a network of "hiker only trails," limiting the number of animals allowed or eliminating stock in sensitive areas such as meadows. Wilderness watch-dog groups have tended to focus on ensuring that federal agencies are complying with existing environmental laws and regulations.

The positions taken by the federal agencies that manage wilderness are more difficult to generalize. The Wilderness Act of 1964 does not provide any specific direction regarding recreational stock in wilderness, giving the agencies some latitude: "Each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as to preserve its wilderness character." On the whole, the Forest Service and Bureau of Land Management (BLM) are regarded as more sympathetic to stock use. However, policies for managing recreational stock use tend to vary not only between agencies but also within agencies and management decisions are often made at the individual wilderness level. National Park and US Fish and Wildlife Wilderness Areas tend to use formal regulations to manage use, which reflects their conservation-oriented mandates. McClaran (2000) found that 91% of National Park Service areas relied on formal regulations whereas BLM and Forest Service sites were more likely to rely on guidelines.

Both stock users and their critics often argue that the managing agencies are unfairly sympathetic to the other group. Stock users suggest that agency policies "seem to be an appeasement to a small segment of extremists who simply do not like seeing horses or mules in wilderness and find favor with an equally extremist element in the agency who justify their actions as necessary to protect wilderness character" (Hill 2001a). Similarly, groups that advocate for restrictions on stock use, like the High Sierra Hikers Association, note "We feel that the management agencies in the High Sierra are heavily biased in favor of commercial interests such as horse and mule packers" (HSHA 2004).

The arguments presented by both sides are complex. The following section will summarize some of the most common perspectives, elaborating on both human and resource-based positions.

Human Aspects of the Argument

National Heritage and Traditional Use -- National heritage of pack and saddle stock use is the foundation of many arguments favoring stock use. America has a tradition of pack stock use by early pioneers and Native Americans. Many horse users feel that traveling with pack stock is part of their heritage. Jennifer Roeser (2003), operator of a pack station in Inyo National Forest, testified before the House Subcommittee on National Parks, Recreation and Public Lands:

To be able to view and live as our early explorers did provides many with the opportunity to connect with history outside of a museum setting. Our link to the past is our ability to carry out this tradition and culture of the early day pioneer and work to ensure that these traditions are not lost to future generations.

Outfitters argue that they are providing opportunities for the public to have these historical kinds of experiences that might not otherwise be available to them. They are also quick to note that section 4(6) of the Wilderness Act allows commercial use "to the extent necessary for activities which are proper for realizing recreational or other wilderness purposes."

Many stock users argue that pack stock access to wilderness should, at the very least, be maintained to the level and character that existed when an area was designated. Proponents often cite section 4b of the Wilderness Act, which states "wilderness areas shall be devoted to public purposes of recreational, scenic, scientific, educational, conservation and **historical** use" (emphasis added). The Valley Horse Owners website explains:

The facts prove that packers are packing no more than they did in 1964 -- the inception of the Wilderness Act. The packers at that time served 60% of the visitors, that number is now approximately 10% of the users, but in actual numbers of people it is the same or less than 36 years later. For the year 2000, the quantity of horses and mules on the east side of the Sierra is 694. In 1934 there were 672. Hardly a cause for elimination of the public service.

Groups such as High Sierra Hikers Association are concerned that accepting this argument could result in environmental impacts being overlooked because of the

...tendency of established users to dispute the significance of the impacts identified by scientists, and to demand that their established uses be "grandfathered in" (i.e., allowed to continue regardless of the impact). At that point, the obvious path of least resistance for managers is to weaken the standard of "acceptable" impact and let the established uses continue (Suk 1998).

While there is little question that pack stock use has a long history, many believe that some traditional practices should be modernized, given available technology and increased understanding of the environment. For example, some packers still carry heavy cast iron pans, wood burning stoves and multi-room tents, although lightweight equipment is readily available and could reduce the number of animals required for a pack trip (Forstenzer 1996, Suk 1998). Leave No Trace practices, while adopted by many stock users, have not universally replaced traditional practices that leave a larger impact on the land such as wiring or nailing hitch racks to trees, cutting bows or digging trenches around tents. Those supporting restrictions on stock use often cite these kinds of impacts. However, stock users tend to believe that all recreational stock users are unfairly blamed for the unsound behaviors of a small minority.

Recreational Experiences --Pack stock allows groups of people of different ages and physical capabilities, such as church retreats, scout troops or extended family gatherings, to enjoy wilderness together (Valley Horse Owners Association 2000). Generally stock users tend to travel in larger groups than those on foot (Lucas 1985). Stock users argue that group size limits unfairly affect stock users and can remove,

...America's last chance for families to vacation together without gadgets that are so much a part of our daily lives. No video games, no phones and no television means families interact together on a one to one basis. Spending time together is a part of the backcountry experience (Roeser 2003).

There is little debate that pack and saddle stock provide opportunities for people with physical disabilities and others who would not otherwise be able to experience wilderness. However, there is disagreement between hikers and stock users about the affect of large groups on the wilderness experience. In 1993 Watson and others asked wilderness visitors to identify a "maximum acceptable" group size, hikers reported group size limits of 10-13 people and 8-11 horses per group. Stock users reported "maximum

acceptable" numbers of 7-11 people and 14-26 horses per group. Hiker groups suggest that the social experiences that are desirable to large stock groups might be more appropriate outside of wilderness. The Wilderness Act provides little assistance in settling the debate. Section 2c states that wilderness should provide "outstanding opportunities for solitude" but it appears that groups define solitude differently. The Backcountry Horsemen of America explain, "As a value solitude can not be scientifically measured. It is a personal perception shaped by human experience, customs and expectations. What seems crowded to one person is isolation to another" (Lange 1997).

There also seems to be some disagreement about the term "preservation of wilderness character" found in section 2a of the Act. Both sides want to offer their own definitions. Hiker groups argue that the social experience (visitor expectations and visitor satisfaction) should be considered when making management decisions about wilderness. They support the option of hiker-only trails for "hikers who truly desire an experience free of the dust, manure, urine, and flies often found on the main stock routes" (High Sierra Hikers Association 2004). They argue that, "social scientists have developed modern techniques to provide managers with sound, reproducible, peer-reviewed conclusions on which to base reasonable limits that will effectively protect the "wilderness experience" of backcountry visitors" (Ibid.). Given that stock users represent a minority of wilderness users, some believe that it is unreasonable to incur these impacts when only a small portion of visitors benefit.

Stock users counter that social values are subjective and that more tangible criteria should be used to measure "wilderness character" or as a basis for restrictions on use:

When a federal agency takes a position on values, and calls them resources, it is an attempt at social control. It is an attempt to tell people how they should think and behave. What they should like and dislike. Such social manipulative policy is unacceptable to Back Country Horsemen of California (Lange 1997).

Economic Issues —The American Horse Council claims that the recreational horse industry directly or indirectly employs 317,000 people and contributes \$23.8 million to the economy annually. While these statistics do not represent only wilderness riders, proponents are quick to point out that with about 4.3 million recreational horse

users in the United States, there are many parties interested in sustaining stock use (Barents Group 1996).

Commercial outfitters operating under permit with federal agencies argue that limiting pack animals would impose economic hardship for their businesses and deprive the recreating public of an enjoyable wilderness experience. Al Bukowsky (2000), an outfitter under permit in the Frank Church River of No Return Wilderness explained that group size limitations would ultimately affect the public:

Families are the market these days. Without reasonable party sizes that allow charging a price that families can afford, many outfitters will simply be forced out of business or forced to turn to a different upscale, adult market. Many families will be denied access and an affordable opportunity to see the last wild places under the supervision of professional guides.

The other side, however, argues that the cost to the public of sustaining pack and saddle stock use should also be considered. The economic benefits to permittees should be secondary to protecting the wilderness resource. The High Sierra Hiker's Association website maintains that commercial packers, "exploit, debase, and pollute our cherished national lands for private gain — to the detriment of those of us on foot, and at great cost to the public."

Resource-based Aspects of the Argument

Environmental impacts resulting from stock use are the foundation of many arguments opposing recreational stock use. Many hikers maintain that stock users have significantly more impact than users traveling on foot. Resource concerns include: impacts to native vegetation through trampling, overgrazing and introducing non-native species; impacts to trails through increased erosion; water contamination from animal waste and increased sedimentation at stream crossings; impacts to native wildlife through competition for food resources, introduction of disease and disturbance; impacts to campsites through compacted soil and tree damage from tying stock to trees.

Many of these concerns, particularly trampling vegetation and eroding soil (Cole and Spildie 1998), and impacting trails and campsites (Cole 1983) are well supported by the recreational scientific literature. Groups such as the Back Country Horsemen acknowledge the potential for stock to cause resource impacts. They advocate "Leave no

Trace" principles to mitigate resource damage such as tying stock 200 feet from water, tying to high lines rather than trees and carrying less gear so that fewer animals are necessary. Stock users tend to believe that the biggest impact of stock use on the environment is from a minority of users who don't adhere to these principles. They also assert that there are lingering impacts from bad practices of the past: "tree and root damage lasts for a long time. We are still paying for things that have been done 40 or 50 years ago ...horsemen who don't take every precaution they can to eliminate any further damage are cutting their own throats" (Fagerland 1995).

Although hikers tend to be less tolerant of resource impacts than stock users, both sides often advocate for striking a balance between human use and protecting the natural environment. However, perceptions of what constitutes protecting the environment and appropriate human use still differ. As Ann Lange (1999), the BCHA Wilderness Committee Chair, explained:

The new philosophy seems to be that all human use be labeled as damage, resulting in the potential for dramatic increases in rules, regulations, and exclusionary practices. Of course, the effects of recreation use on the environment are legitimate concerns. The key question to be answered remains "how much change is acceptable?"

Stock users are wary of arguments and studies presented by opponents of stock use and believe that many of these arguments are not supported by scientific research. In the absence of wilderness-specific research on recreational stock, studies from the range management literature are often used in decision-making (Cole 1989). As Gregory Jones (1999), a member of the board of directors for the Kentucky Horse Council, explained: "The propensity for applying conclusions from anecdotal or poorly developed data is also appalling. The extrapolation of findings from one ecosystem to another seems to be common. The result has been to develop conclusions that are unsupported by sound science. Practices such as referencing the impacts of cattle on Central American rain forests as a basis for North American ecosystems must end!" Stock users advocate for science-based decision making but suggest that decisions should be made based on use levels, environmental characteristics and site specific scientific studies on a site-by-site basis.

Stock users refute many of the resource-based arguments maintaining that many don't make sense, are contradicted by other studies or are unsupported by science. They have argued that evidence showing horses spread weeds is anecdotal (Clifford 2002), natural processes rather than horse traffic are the dominant causes of trail erosion (Quinn), stock manure does not contaminate ground or surface water (Johnson et al. 1997) and wildlife impacts are unsubstantiated (Summers 2004).

Discussion

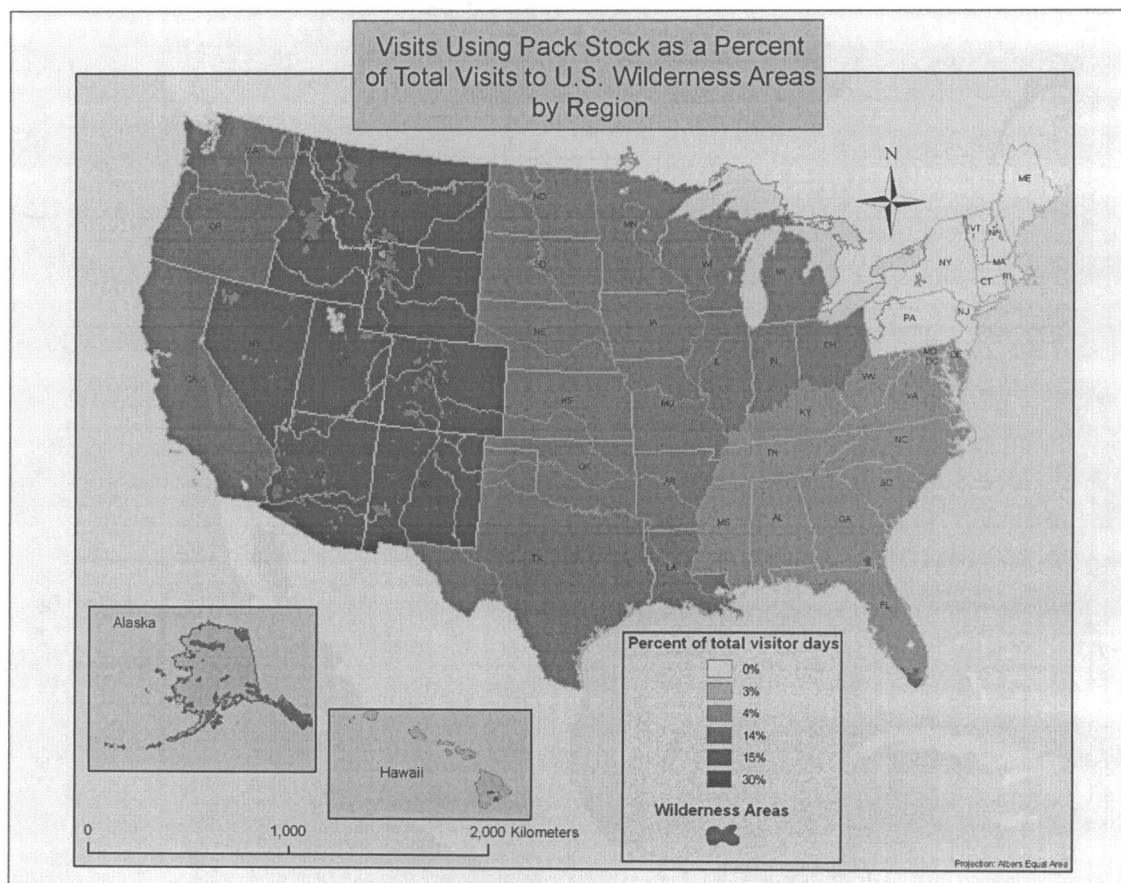
This review of arguments presented by both sides suggests that the antagonism between supporters and critics of pack and saddle stock use is based on fundamental differences in philosophy, particularly among holders of the most extreme perspectives. From the stock users' point of view, wilderness is a resource that should be used for public benefit. This utilitarian philosophy suggests that a principal function of the wilderness resource is to provide economic benefits, social opportunities and recreational experiences.

Critics, on the other hand, say they are most concerned about protecting the wilderness resource. The kinds of experiences that these users seek in wilderness are markedly different from stock users. Solitude and freedom from evidence of other visitors – such as manure, eroded trails or hitching racks – are highly valued.

Many of the arguments offered by both sides are based on emotion and prejudice. Over time, positions have polarized with proponents and opponents distrusting arguments offered by the other “side.” This trend may be a byproduct of the decision-making process whereby each group is trying to convince decision makers that they perceive the resource properly. The process provides an incentive to exaggerate the other group's position so that it appears more contrary and unreasonable than their own.

GEOGRAPHIC SCOPE OF THE ISSUE

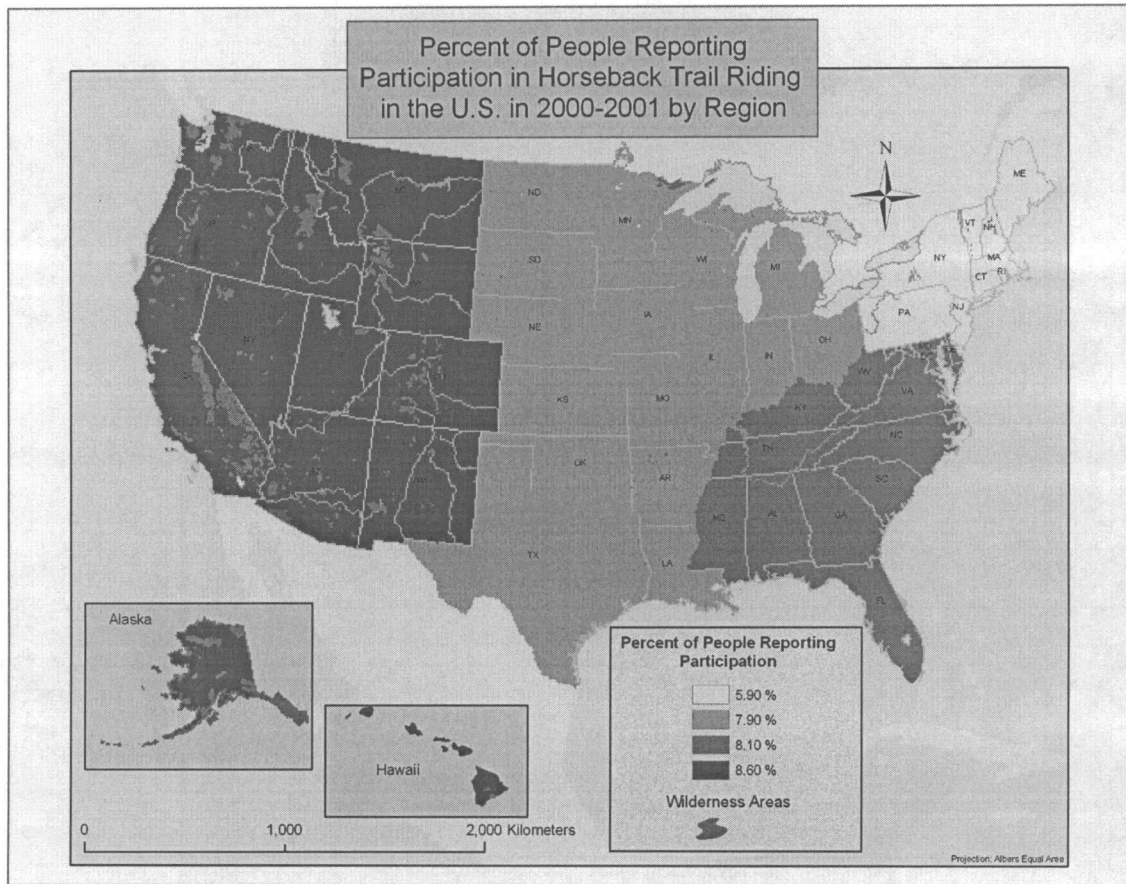
Wilderness travel with pack and saddle stock is often presumed to be a western phenomenon--a relict of the cowboy tradition of the West. Data showing the percentage of wilderness visitors traveling with stock seems to support this assumption. The proportion of recreational use by stock users is greatest in the Rocky Mountain and Western States—pack stock represent 30 percent of total wilderness visitation in the Rocky Mountain States, 15 percent in Western States, 14 percent in the Midwest, 4 percent in the Southeast, 3 percent in Alaska and Hawaii and 0 percent in the Northeast (see Figure 1).



Data source: McClaran and Cole 1993

Figure 1. Percent of total wilderness visitation that includes travel with pack stock in areas that allow recreational stock use. Results are displayed by region: Pacific Northwest, Rocky Mountain, Midwest, Northeast, Southeast and Alaska/ Hawaii. The Northeast Region shows zero percent pack stock visitation because recreational stock use is not allowed in wilderness areas in those states.

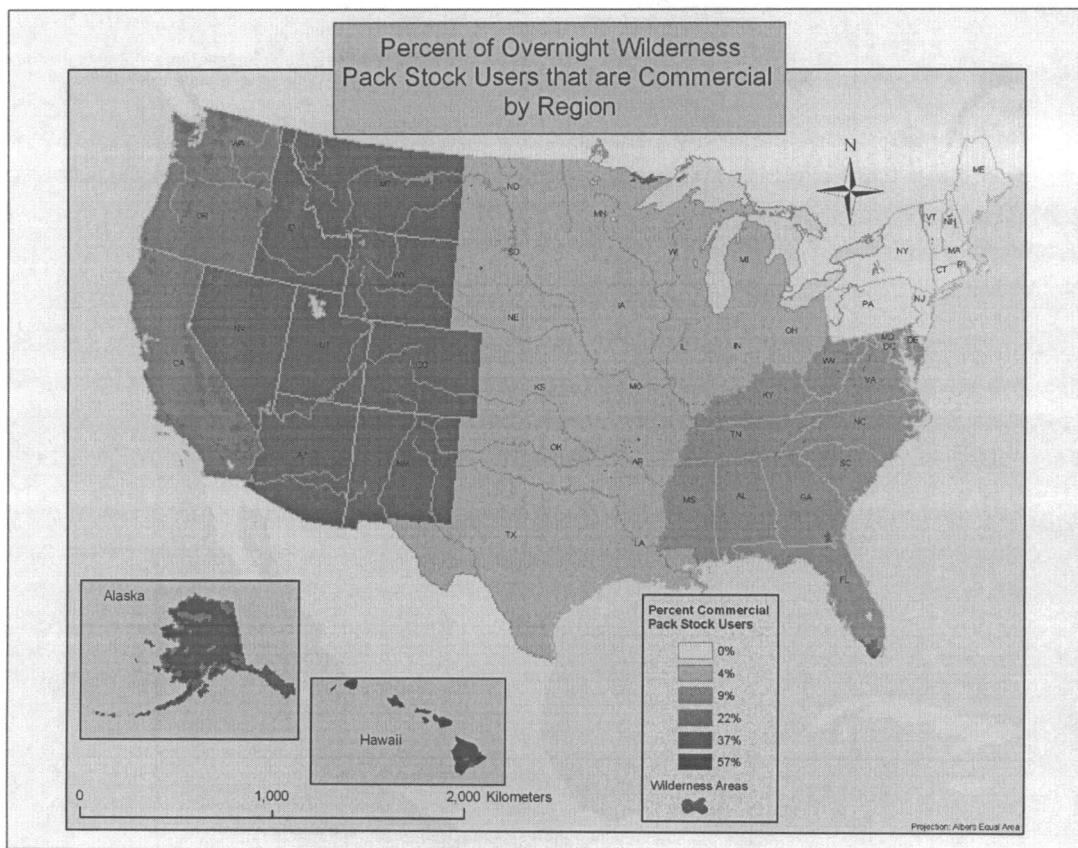
However, results of a National Survey on Recreation and the Environment (Cordell 2004) show that participation in horseback riding on trails is only slightly greater in the West than in other regions across the country (Figure 2). Surprisingly, the reported participation in Western (8.6%), Southeastern (8.1%) and Midwestern States (7.9%) is similar.



Data source: National Survey of Recreation and the Environment (Cordell 2004)

Figure 2. The percent of people participating in horseback trail riding in 2000-2001 reported by region: West (including Alaska and Hawaii), Midwest, Northeast and Southeast. Data are based on a weighted sample of 22, 847 individuals in the U.S. over age 16.

This suggests that Figure 1, the map showing the percentage of wilderness stock use by region, does not tell the whole story—there are some important regional differences that are not captured. East of the Rocky Mountains stock users are more likely to be day-users traveling on horseback. Wilderness areas in the East tend to be much smaller than their western counterparts. Limited terrain makes travel with pack strings or multiple day excursions unnecessary; therefore commercially outfitted pack stock trips do not represent a significant proportion of use, as they do in the West. In the Midwest and Southeast less than 9 percent of wilderness stock travel is provided by commercial outfitters whereas 22 percent of use in the West and 37 percent in the Rocky Mountain States is by commercial parties (see Figure 3).



Data Source: McClaran and Cole 2003

Figure 3. The percent of overnight pack stock use in wilderness that is conducted by commercial outfitters, displayed by region: Pacific Northwest, Rocky Mountain, Midwest, Northeast, Southeast and Alaska/ Hawaii. The Northeast Region shows zero percent commercial pack stock use because recreational stock use is not allowed in wilderness areas in those states.

Not surprisingly, issues that have emerged in the West are not mirrored exactly in the East. The concerns about outfitter use that have dominated much of the debate in the West are not relevant east of the 100th meridian where outfitters are much less common. However, concerns about resource impacts and conflicting ideas about wilderness management are shared across the nation.

Recently, several forests in the East have become so concerned about the resource impacts of off-trail stock use that they have limited recreational stock travel to trails and roads. Both the Chattahoochee-Oconee National Forest in Georgia, responsible for managing ten wilderness areas, and the Hoosier National Forest in Indiana, responsible for managing the Charles Deam Wilderness, no longer allow equestrian travel off trails. Other eastern forests are considering similar restrictions. For example the Shawnee National Forest in Illinois, which manages seven wilderness areas, is currently drafting an Environmental Impact Statement for managing equestrian use. At a recent meeting of Forest Service recreation staff in the Southeastern Region the impact of horse use was rated as the second highest concern next to off-highway-vehicle impacts (Caffin 2004). Not surprisingly, demand for riding trails has also become a concern. Equestrian groups in the East have been very vocal about losing riding opportunities.

Discussion

Clearly concern about recreational stock use and how it is managed is not limited to Western States, although the issue does vary regionally. Further research is needed to understand the issue at a finer scale. A detailed survey of on-the-ground wilderness managers would provide a better understanding of day-to-day social and resource issues. A more comprehensive survey would also provide a better understanding of the variation between wilderness areas and the influences of geographic variables such as proximity to urban areas and size of the wilderness area.

CONCLUSION

Perceptions of pack and saddle stock in wilderness have evolved in the forty years since the Wilderness Act passed. Public attitudes toward wilderness and the environment have changed and new recreational users with very different values increasingly outnumber stock users. As a result, a growing debate has surfaced about the appropriateness of stock use in wilderness areas. The Wilderness Act does not provide answers.

Underlying the arguments on both sides of the debate are deeply held beliefs and traditions. An examination of the arguments presented in interest group publications helped to highlight perceptions of the issue and made it clear that both sides define the problem very differently. For stock users the issue is about continued access to wilderness areas and defending the traditional role of pack stock in wilderness. For critics of stock the issue is about preserving 'wilderness character' which they define in terms of social and ecological impacts. Because perceptions of the issue are based on strongly held values many arguments are based on emotion and prejudice rather than science.

The politics of the decision-making process have further encouraged the polarization of positions. As groups try to convince resource managers that their perception of the resource is correct there is an incentive to exaggerate the other group's position so that it appears more contrary and unreasonable than their own. Groups have also been successful using policy forming techniques that side-step negotiation. Stock users have brought their concerns into national politics and environmentalists and hiker groups have used the courts to their advantage. In these arenas there is little incentive to approach the issue from a position of compromise—instead parties tend to present extreme positions. In addition, victories in the legislative and political realms have made collaboration seem unnecessary. Both proponents and opponents of stock use view the other side as unyielding and unwilling to compromise.

Conflicts like this, where there is no real agreement about what the problem is, are considered "wicked problems" because resolution is challenging (Allen & Gould 1983). As Allen and Gould note, "wicked problems are almost never successfully solved by selecting the rationally best solution but more often by choosing the emotionally

satisfying one. People are the key—people are what make problems wicked and people are the ones that can solve them.”

Once the conflict escalates and becomes political, as it has in Sierra Nevada wilderness areas, resolution at the local wilderness level is unlikely—resource managers lose the ability to influence policy. The issue becomes a battleground for advocates to promote their own resource values and interests using legal and political tactics, which make collaboration or compromise a challenge. Political “resolution” strategies are more likely to decree a solution. In this context, rational planning, science and fairness are seldom considered.

However, in wilderness areas where the conflict has not escalated, wilderness managers have the opportunity to proactively manage the conflict. Because stock users and hikers have very different values, some level of conflict is inevitable (Kajala 1994). Interest group literature suggests that although both groups have many divergent values there is some common ground—both proponents and critics of stock use are concerned about wilderness conservation and define themselves as “environmentalists.” Drawing out these similarities could play an important role in bringing groups together to resolve the conflict.

While resolution is unlikely amongst those that believe all stock use in wilderness is inappropriate, compromise among those with less extreme views is possible. Adaptive management, which has often been recommended as a way to resolve “wicked problems,” could be a useful approach (Salwasser 2004). This tool recognizes that there is uncertainty associated with any policy and therefore some adjustments should be permitted after implementation. This is particularly useful since research about the success of past recreational stock management policies is limited. Adaptive management is likely to be supported by the stakeholders because it can appease stock users who favor less restrictive actions and give hikers and environmental groups insurance that resource impacts will be addressed if less restrictive efforts are unsuccessful. Of course, success will depend on resources being committed to monitoring, participants being willing to compromise and learn from mistakes and federal agencies’ being willing to accept reasonable alternatives that emerge.

This is an issue that is going to be difficult to ignore—it seems to be gaining momentum as interest groups become more organized. Concern about the impacts of recreational stock use cover a broad geographic scope, particularly in Western and Southeastern states. It will be important for wilderness managers across the country to share their experiences as they work to address this conflict.

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